



Illinois Department of Transportation

Memorandum

To: Quality Control Managers
From: Michael F. Wilhelm
Subject: Bituminous Mix Designs
Date: July 24, 2000

The Illinois Division of Aeronautics has established the following summary procedure for contractor mix designs, based on Illinois Division of Aeronautics Policy Memorandum 96-2.

1. Sampling

- Aggregate stockpiles shall be sampled in accordance with Department of Transportation Quality Control procedures.
- An endloader shall be used to make 3 or 4 aggregate pads, approximately 1 foot in depth.
- Material shall be removed from 5 locations in each pad in the form of an "X".
- The contractor shall obtain the following amounts of each material:

CA-07:	4 bags (approximately 100-150 pounds)
CA-13/16:	3 bags (approximately 100-150 pounds)
FA-01/02:	2 bags (approximately 75-100 pounds)
FA-20/21:	2 bags (approximately 75-100 pounds)
Mineral filler	1 can (approximately 10-15 pounds)
Asphalt Cement	1 gallon

2. Gradations

- The aggregates in each bag shall be well mixed and split to the proper test weight & the remaining aggregate shall then be placed back into it's bag for future use (DO NOT DISPOSE OF THE AGGREGATE)
- Washed gradations shall be performed and the results compared to the quarry's target percentages. This procedure shall be used for all aggregates that will be used in the mixture(s).
- Upon completion of all gradations, the results of the test shall be recorded in the appropriate section of the attached Bituminous Worksheet. The completed sheet shall be faxed along with the Bulk Specific Gravities and Absorptions to:

QA/QC Engineering, Inc.
Attn.: John Staab
(217) 529-7712

3. Blending and Testing

- Upon receipt of the gradations and gravities, the Division of Aeronautics or its representative, QA/QC Engineering, Inc., shall determine the blends of each of the ingredient materials to be used.
 - The contractor shall perform all physical tests of the mix design, to determine the following:
 - Marshall Stability and Flow
 - Bulk Specific Gravity “d”
 - Maximum Specific Gravity “D”
4. Job Mix Formula
- The testing information on the bituminous worksheet shall be forwarded to QA/QC Engineering, Inc. for determination of the Job Mix Formula (JMF). QA/QC Engineering, Inc. will then forward the recommendation to Mr. Michael Wilhelm, Engineer of Materials, for final approval.

If you have any questions, contact Mike Wilhelm at (217) 785-4282.